

Remarks

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested.

The claims have been reviewed and revised to make a number of editorial revisions thereto. No new matter has been added.

Claim 1 has been rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claim 1 has been amended so as to address this rejection. As a result, withdrawal of the rejection under 35 U.S.C. §101 is respectfully requested.

Claims 1, 6 and 11 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of Application No. 11/594,161 and claims 1-3 of Application No. 11/594,137.

Without acquiescing to the provisional obviousness-type double patenting rejections, it is noted that Application Nos. 11/594,161 and 11/594,137 were filed after the filing of the present application. Therefore, in accordance with M.P.E.P. §804(I)(B)(1), when the provisional obviousness-type double patenting rejections become the only remaining rejections in this application, the provisional obviousness-type double patenting rejections should be withdrawn and the application should be permitted to issue as a patent without a terminal disclaimer. As a result, the Applicants hereby request that the provisional obviousness-type double patenting rejections be held in abeyance.

Claims 1, 6 and 11 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Naimpally (US 5,619,337) in view of Oishi (US 6,141,490).

The above-mentioned rejection of claims 1, 6 and 11 is respectfully traversed and submitted to be inapplicable to the claims for the following reasons.

Claim 1 is patentable over the combination of Naimpally and Oishi, since claim 1 recites, in part, a system stream allowed to have a first format (TS) and a second format (PS), wherein

the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, and the pack is larger than the first packet in size,

the first packet stores segmented data of a second packet, and the second packet stores audio information and includes at least one audio frame,

the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS), and

according to the constrained format,

a predetermined number of first packets are grouped and managed as a multiplexing unit, and a total data size of first packets managed in the multiplexing unit is smaller than a data size of the pack, and

a first one of complete audio frames in the multiplexing unit is a first one of audio frames in a payload of the second packet.

The combination of Naimpally and Oishi fails to disclose or suggest the constrained format as recited in claim 1.

Naimpally discloses an MPEG transport encoding/decoding apparatus that includes tuner, demodulation and error correction circuitry 210, a digital VCR interface processor 214, and a digital VCR 216. The circuitry 210 provides a signal D that includes several transport packets for various program transport streams P0, P1 and P2 as illustrated in Figure 3A. When, for example, the transport stream P0 is selected to be recorded, the digital VCR interface processor 214 modifies the transport stream P0 for recording as illustrated in Figure 3B, and the digital VCR 216 then formats the modified transport stream P0 as illustrated in Figure 3C and records the formatted transport stream P0 onto a digital video tape. (See column 6, line 1 – column 7, line 2 and Figures 2-3C).

In the rejection, the format of the transport stream P0 as illustrated in Figure 3C is relied upon as corresponding to the claimed first format (TS) and the format of the transport stream as illustrated in Figure 3A is relied upon as corresponding to the claimed second format (PS). However, Naimpally fails to disclose or suggest that the transport stream P0 illustrated in Figure 3C is allowed to have a constrained format used for converting the transport stream P0 illustrated in Figure 3C to the transport stream P0 illustrated in Figure 3A. Instead, Naimpally discloses that the digital VCR interface processor 214 and the digital VCR 216 modify and format the transport stream P0 illustrated in Figure 3A to get the transport stream P0 illustrated in Figure 3C.

More specifically, the digital VCR interface processor 214 acts to modify a transport packet containing a program association table (PAT) of the transport stream P0, which was selected for recording with a user control 222. Further, the digital VCR 216 formats the

modified transport stream P0 such that each packet (P0) is separated into three packets (P0 tp#), (P0 tp#+1), and (P0 tp#+2) and includes time stamps TS in order to record one program as one program transport stream on the digital video tape. (See column 6, lines 48-59; column 6, line 65 - column 7, line 2; and Figures 3B and 3C). It is clear that these operations either individually, or in combination, do not correspond to the converting recited in claim 1. Further, claim 1 recites that the constrained format is used for converting the claimed first format (TS) to the claimed second format (PS), not converting from the second format (PS) to the first format (TS), as would be necessary based on the rejection's reliance on the format of the transport stream P0 as illustrated in Figure 3C as corresponding to the first format (TS) and the format of the transport stream as illustrated in Figure 3A as corresponding to the second format (PS).

Thus, it is apparent that Naimpally only discloses the selection of one program transport stream including one program from a plurality of program transport streams including a plurality of programs, and does not disclose or suggest that the selected transport stream has a structure of one format (a first format (TS)) that is convertible to a stream having a structure of another format (a second format (PS)), as recited claim 1. As a result, Oishi must disclose or suggest these features in order for the combination of Naimpally and Oishi to render claim 1 obvious.

Regarding Oishi, it discloses a data multiplexing method that is able to prevent the failure (e.g., overflow or underflow) of a buffer memory of a decoding apparatus. The data multiplexing method is disclosed as being applicable to an MPEG 1 system stream and an MPEG 2 program stream, or to an MPEG 2 transport stream. Further, Oishi discloses the basic structure of a multiplexed stream. (See column 1, line 60 - column 4 line 4; column 11, line 50 - column 12, line 26; column 15, line 2 - column 16, line 15; and Figures 2 and 7-9).

Based on the above discussion, Oishi discloses the structure of the multiplexed stream that includes a plurality of packs, each of the packs having a plurality of packets which include video data or audio data. However, claim 1 specially recites that the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS), and according to the constrained format, a predetermined number of first packets are grouped and managed as a multiplexing unit, a total data size of first packets managed in the multiplexing unit is smaller than data size of a pack, and a first one of complete audio frames in the multiplexing unit is a first one of audio frames in a payload of a second packet.

It is apparent that Oishi fails to disclose or suggest the constrained format used for converting the system stream from the first format (TS) to the second format (PS) and the format of the first one of complete audio frames in the multiplexing unit as recited in claim 1. Initially, Oishi only discloses a packet which includes the audio packet (see column 2, line 5- 15 and Figure 2), and not a first one of complete audio frames in the multiplexing unit. Further, Oishi discloses a coding apparatus that comprises a scheduler 67 that calculates a buffer capacity of a head portion of a present stream (i.e., the multiplexed stream MBb) and a multiplexing initial time from an end portion of a previous stream (i.e., the multiplexed stream MBa) to prevent overflow or underflow to buffers 25 and 26 (see column 11, lines 9-26), not converting the system stream from a first format (TS) to a second format (PS). Additionally, Oishi only discloses that the MPEG 1 system stream, the MPEG 2 program stream and MPEG2 transport stream may be applied to the coding apparatus (see column 1, line 60 - column 4, line 4 and column 15, line 2 - column 16, line 6). Therefore, Oishi fails to address the deficiencies of Naimpally. As a result, claim 1 is patentable over the combination of Naimpally and Oishi.

Regarding claims 6 and 11, they are patentable over the combination of Naimpally and Oishi for reasons similar to those set forth above in support of claim 1. That is, claims 6 and 11 each recite, in part, a first format (TS) that is allowed to have a constrained format used for converting a system stream from the first format (TS) to a second format (PS), wherein encoding is controlled according to the constrained format, the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, the pack is larger than the first packet in size, the first packet stores segmented data of a second packet, the second packet stores audio information and includes at least one audio frame, and according to the constrained format, a predetermined number of first packets are grouped and managed as a multiplexing unit, a total data size of first packets managed in the multiplexing unit is smaller than a data size of the pack, and a first one of complete audio frames in the multiplexing unit is a first one of audio frames in a payload of the second packet, which features are not disclosed or suggested by the references.

Because of the above-mentioned distinctions, it is believed clear that claims 1, 6 and 11 are allowable over the references relied upon in the rejection. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a

manner as to result in, or otherwise render obvious, the present invention as recited in claims 1, 6 and 11. Therefore, it is submitted that claims 1, 6 and 11 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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